REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1-9 are pending in the application subsequent to entry of this Amendment.

Multiple dependencies in many of the originally filed claims have been restored, as there are two independent claims. The above amendments to claims 3, 5, 6, 8 and 9 render all of the claims either directly or indirectly multiply dependent from either claim 1 or claim 2.

The current Action contains two rejections, both based upon prior art; *see* items 2 and 5 with commentary. The Examiner rejects claims 1-2 and 8-9 under 35 U.S.C. 102(a) as being anticipated by WO 00/23523 ("WO'523" hereinafter). The Examiner rejects remaining claims 3-7 under 35 U.S.C. 103(a) as being obvious over WO'523 in view of JP Pat. Appln. Publication No. 2000-334876 ("JP'876" hereinafter). Both of these rejections are based upon a considerable amount of conjecture, and various physical properties argued to be "inherent" in the prior art turn out not to be the case. Applicants are able to provide "an objective" demonstration to counter the assertions included in the Action, and it follows.

While claims 1 to 9 are pending, since claims 1 and 2 are independent claims, applicants now explain claims 1 and 2 in detail below. Claims 3 to 9 are patentable by virtue of their dependency from claims 1 and 2.

As pointed out by the Examiner, Example 1 of WO'523 discloses a laminated substrate that is comprised of a polymethyl methacrylate (PMMA) substrate (a), an organic-inorganic graded material layer (b) formed on the substrate (a) and, further, a photocatalytic titanium dioxide (TiO_2) layer (c) formed on the layer (b). The Examiner asserts that the laminated structure disclosed in WO'523 satisfies the physical properties defined in the present claim 1 since the laminated substrate disclosed in WO'523 is identical to the high-durability photocatalytic film recited in the present claim 1, which has a substrate (A), a protective layer (B) or an organic-inorganic composite graded film formed on the substrate (A) and, further, a photocatalytically active material layer (C) formed thereon.

A closer review reveals these assertions are not correct.

The substrate as a base for the laminated structure of WO'523 is formed from polymethyl methacrylate (PMMA), and as is clear from a copy of the attached monograph (Encyclopaedia Chimica published (in Japanese) by Kyoritsu Shuppan K.K. Japan), PMMA has the property of

being soluble in acetone which is a typical example of a ketone. As such PMMA does not satisfy the requirement of the present claim 1 part (A)(2) that a film formed of PMMA must have a haze change of 1 % or less after the film surface is wetted with methyl isobutyl ketone, which is clearly a ketone. An English translation of the Encyclopaedia Chimica monograph is attached.

In contrast to WO '523, in the high-durability photocatalytic film of the present claim 1, the substrate film (A) has a characteristic feature that the film (A) has a haze change of 1 % or less after the film surface is wetted with methyl isobutyl ketone.

It is because an antiweathering agent is incorporated into the film or an ultraviolet ray intercepting layer is formed on the film -- as is described in the specification, page 11, lines 2 to 13 -- that the substrate film (A) in the present invention satisfies the requirement that the film (A) has a haze change of 1 % or less after the film surface is wetted with methyl isobutyl ketone and hence has solvent resistance even when PMMA (see the specification, page 10, lines 18-19) as is used in Example 1 of WO'523 is used as a raw material for forming the substrate film (A) in the high-durability photocatalytic film of the present claim 1.

As is explained above, in the property of substrate, the laminated structure disclosed in WO'523 is completely different from the high-durability photocatalytic film of the present claim 1, so that the present claim 1 is not anticipated by WO'523, nor is it obvious over WO'523.

Claim 2 is also patentable. When claim 2 is compared with the above claim 1, the difference is that the time period for the accelerated weather resistance test is 1,000 hours in claim 2 or 3,000 hours in claim 1, while the other requirements are common to these claims 1 and 2.

Therefore, claim 2 is not anticipated by WO'523, nor is it obvious over WO'523.

From the information now provided it will be apparent that the physical properties argued to be "substantially identical" or "inherent" in the prior art turn out not to be the case. Applicants' claims are neither anticipated by nor suggested from the disclosure of WO'523. Because of this it is not necessary to address the additional documents cited in item 5 of the Official Action in which dependent claims 3-7 only were involved. These claims are patentable by virtue of their dependency from an allowable main claim.

Reconsideration and favorable action are solicited. Should the examiner require further information, please contact the undersigned.

Respectfully submitted,

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ENCYCLOPAEDIA CHIMICA
Published December 1, 1975 (18th printing)
by Kyoritsu Shuppan Co., Ltd

[Polymethyl methacrylate]

Polymer of methyl methacrylate. ***Production process:*** Generally, mass polymerization is carried out in the presence of light, a peroxide or an azo-based initiator. Mass polymerization is carried out as well in industry, and a production process rapidly proceeds from a semi-polymerization state in the form of syrup to a polymerization-completed state in a solid state. Further, since almost no monomer is left, the process is advantageous for casting polymerization. With an increase in polymerization ration, the polymerization speed increases, because the probability of termination reaction presumably decreases due to an increase in viscosity and stability of grown free groups. ***Properties:*** transparent solid having d^{25} 1.19-1.20, n_D 1.482-1.521, softening point 80-125° and molding temperature 120-160°. Light transmittance reaches 92 %, a fast and tough resin, and one of resins that are the most excellent in stability and transmittance. However, the defect is that a surface is easily damaged and easily undergoes cracking. **Soluble in acetone**, ethyl acetate, ethylene chloride, toluene, formic acid, etc.: Insoluble in water, aliphatic alcohol, ether, hydrocarbon, carbon tetrachloride, formamide, etc.: Stable against 10 % sulfuric acid, hydrochloric acid, nitric acid, sodium hydroxide, aqueous ammonia, sodium chloride aqueous solution, etc., at room temperature. A feature is that polymethyl methacrylate is thus less susceptible to hydrolysis as compared with polymethyl acrylate. Susceptible to pyrolysis, and decomposable in some monomers. Crosslinking and disintegration take place with irradiation with radioactive ray. Spinable to fibers, but no good

fibers are formed: ***Use:*** Being excellent, as a so-called organic glass, over general glass in processability, transmittance, specific gravity, safety, etc., polymethyl methacrylate is used for window glasses, windshields, etc., of airplanes, automobiles, etc., and besides these, it is widely used in optical devices such as lenses, prisms, etc., light source for concealed lighting, medical materials (such as denture basal seat, artificial denture, artificial eye ball, etc.), decorative materials, watch glasses, and the like. Further, widely used as lacquer and an adhesive. Trade names LUCITE (manufactured by E.I. du Pont de Nemoures & CO., Ltd. in US), "PLEXIGLASS" (phonetically) (manufactured by Rohm & Haas Co.)